

## REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and these remarks.

Claim 1 is currently amended. Support for this amendment is discussed in Strategies 1-3 at pages 9-10. Claims 12-15 are presently withdrawn from consideration. After amending the claims as set forth above, claims 1-15 are now pending in this application.

### **I. Lack of anticipation and non-obviousness of the claims**

Under 35 U.S.C. 102(e), the examiner rejects claims 1-4 and 7-11 as allegedly anticipated by or, in the alternative, under 35 U.S.C. 103(a) as allegedly *prima facie* obvious over Stillman (U.S. Patent No. 7,115,297). Stillman discloses a fiber-water composition employing encapsulation as opposed to large quantities of sugar to mask undesirable flavors and odors associated with biologically active agents. See column 53, lines 18-26.

On the other hand, the examiner's citations at page 5, paragraph 3 of the office action, contradict the proposition that Stillman teaches or suggests the claimed invention. In fact, encapsulation of a probiotic microorganism using a mixture of protein and carbohydrate, as presently claimed, is not implicated at any point by Stillman.

Section 2131 of the MPEP states that a "claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior-art reference." Since Stillman fails to teach encapsulation of a probiotic microorganism by any means, much less the mixture of a protein and carbohydrate of the present invention, the reference cannot defeat novelty with respect to the present claims.

Stillman likewise fails to render the present invention obvious, since the reference makes no suggestion of forming a probiotic encapsulant with a protein and carbohydrate mixture, as presently recited. Furthermore, Stillman does not even hint at increasing the stability and shelf-life of a probiotic microorganism by encapsulating that microorganism, as occurs in accordance with applicant's claimed invention.

On this last point, Figures 1-8 and particularly Figure 6 of the subject application evidence an improvement, wholly expected in view of the prior art, regarding the stability of an microorganism encapsulant that is prepared according to the claimed invention. Thus, the highly stable encapsulant of the present invention precludes deterioration, allows handling under stringent conditions such as spray drying, and increases the shelf-life of a probiotic microorganism.

Against these indicia of non-obviousness, Stillman cannot render the present invention obvious, within the meaning of Section 103. For this reason and the others identified above, the examiner is asked to reconsider and withdraw the present rejections.

## **II. Claim Rejections under 35 § 103 (a)**

Claims 5 and 6 stand rejected as obvious over the combination of Stillman, *supra*, and WO 02/15720 granted to Fuchs *et al.* The examiner contends that “[i]t would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to select for the protein and carbohydrate of Stillman the whey and resistant starch as disclosed by” Fuchs.

As discussed above, Stillman fails to disclose encapsulating a probiotic microorganism in a mixture of protein and carbohydrate. This deficiency is not remedied by Fuchs, which discloses a composition comprised of whey and a resistant starch and which “may include a probiotic bacteria,” to prevent the loss or increase recovery of muscle mass by stimulating protein synthesis (see page 14, Example 3). Conversely, Fuchs does not disclose encapsulating a probiotic bacteria by any means, nor does the reference teach mixing the whey, resistant starch, and probiotic bacteria components in any way that would allow encapsulation of a probiotic bacteria.

Accordingly, no principled permutation of teachings gleaned from Stillman and Fuchs could have suggested the probiotic encapsulants of the present invention to the skilled artisan. For at least these reasons, applicant requests that the examiner reconsider and withdraw the present rejections.

### CONCLUSION

Applicant submits that this application is in condition for allowance. An early indication to this effect is respectfully requested. Examiner Ware also is invited to contact the undersigned directly, should she feel that any issue warrants further consideration.

The Commissioner is hereby authorized to charge any additional fees, which may be required under 37 C.F.R. §§ 1.16-1.17, and to credit any overpayment to Deposit Account No. 19-0741. Should no proper payment accompany this response, then the Commissioner is authorized to charge the unpaid amount to the same deposit account. If any extension is needed for timely acceptance of submitted papers, then applicant petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of the relevant fee(s) from the deposit account.

Respectfully submitted,

Date 15 January 2009

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